REMARKS

Claims 1-39 are pending in the present application. Claims 1-39 have been examined and are rejected. In the above amendments, claims 1, 19, 20, 23, 27, 34 and 37 have been amended. Therefore, after entry of the above amendments, claims 1-39 will be pending in this application. Applicant believes that the present application is now in condition for allowance, which prompt and favorable action is respectfully requested.

Rejection of Claims 1, 3-7, 9, 11-16, 18, 21, 23, 24, 26-31 and 34-39 Under 35 U.S.C. §102(a)

Claims 1, 3-7, 9, 11-16, 18, 21, 23, 24, 26-31 and 34-39 stand rejected under 35 U.S.C. §102(a) as being anticipated by Yamada *et al* (U.S. Application Serial No. 2003/0133337).

Yamada discloses a semiconductor device **1** directed to making unnecessary circuit operation inactive to reduce power consumption. Device **1** is divided into blocks. The blocks are divided into a non-controlled power supply group **2** and controlled power supply groups $\mathbf{3_1}$ through $\mathbf{3_n}$. (See FIG. 1.) Non-controlled power supply group **2** is always on and controls a power switch $\mathbf{8_1}$ for first controlled power supply group $\mathbf{3_1}$. First controlled power supply group $\mathbf{3_1}$ in turn controls a power switch for the next controlled power supply group. Power supply groups **2** and $\mathbf{3_1}$ through $\mathbf{3_n}$ are connected in a daisy chain, with each power supply group controlling the power switch for the next power supply group. (See also FIGS. 2 and 7.) This daisy chain operation is clearly described in paragraph [0036], which states:

> "**[0036]** The first power switch part $\mathbf{8_1}$ is controlled by the power supply system control part **5** of the non-controlled power supply group **2**. The first next-processing necessity determining part $\mathbf{7_1}$ is connected so as to turn on/off the power switch part of the controlled power supply group of the next stage. A similar connection is made for the controlled power supply groups of each stage following the above-mentioned next stage. The (n-1)th next-processing necessity determining part $\mathbf{7_{n-1}}$ in the (n-1)th controlled power supply group **3***n* is connected so as to turn on/off the power switch part $\mathbf{8_n}$ that controls the power supply system of the nth controlled power supply group **3***n*."

Claim 1 of the present invention, as amended, recites:

"An integrated circuit for a wireless communication device, comprising:

an always-on power domain including circuit blocks coupled to a first power supply and powered on at all times while the wireless device is powered on; and

at least one collapsible power domain, each collapsible power domain including circuit blocks coupled to a second power supply via a respective power connection and powered on or off by the power connection, wherein the always-on power domain determines power on and off states of all of the at least one collapsible power domain and further independently determines power on and off state of each of the at least one collapsible power domain."

Applicant submits that claim 1 is not anticipated by Yamada for at least the following reasons.

First, Yamada does not disclose "wherein the always-on power domain determines power on and off states of all of the at least one collapsible power domain," as recited in claim 1. Rather, FIG. 1 of Yamada shows non-controlled power supply group **2** (which is always on) controlling only power switch $\mathbf{8_1}$ for first controlled power supply group $\mathbf{3_1}$. First controlled power supply group $\mathbf{3_1}$ in turn controls only the power switch for the next controlled power supply group. This daisy chain operation is clearly described in paragraph [0036], which is cited above. Similarly, FIG. 2 of Yamada shows power supply group A (which is always on) controlling only power switch **17** for power supply group B. Power supply group B in turn controls only power switch **18** for power supply group C.

The rejection states that this feature of claim 1 is disclosed by Yamada in paragraphs [0033] and [0042]. Paragraph [0033] states:

"**[0033]** The non-controlled power supply group **2** includes a CPU (Central Processing Unit) **4** that controls the entire semiconductor device **1**, and a power supply system control part **5**. The part **5** is a block that controls the timings of turning on and off at least one of the controlled power supply groups $\mathbf{3_1}$ to $\mathbf{3_n}$."

In Yamada, CPU **4** presumably controls how the n progressing parts $\mathbf{6_1}$ through $\mathbf{6_n}$ operate but does not turn on and off power to these processing parts. This interpretation is supported by the fact that *in the same sentence* that discusses CPU **4**, Yamada also mentions power supply system control part **5**, which controls the power to at least one power supply group. FIG. 1 and paragraph [0036] clearly describe the mechanism for turning on and off

power to each power supply group. Thus, paragraph [0033] does not disclose the feature noted above for claim 1.

Paragraph [0042] of Yamada states:

> "**[0042]** The configuration shown in FIG. 1 may be modified so that the power switch parts are integrally provided in the semiconductor device **1**. In this modification, if the circuit scale of the controlled power group of one function, the group may be divided into groups in order to prevent huge current from concentrating on one power switch part. The divided groups are connected to respective power switch parts, which may be simultaneously controlled by the power supply system control part **5** or the next-processing necessity determining part."

FIG. 1 of Yamada shows power switches $\mathbf{8_1}$ through $\mathbf{8_n}$ being located <u>outside</u> of semiconductor device **1**. Yamada indicates that these switches may be implemented <u>on</u> semiconductor device **1**. A given switch for a given controlled power group may conduct a large amount of current, which may be problematic if the switch is implemented on semiconductor device **1**. To avoid having to pass huge amount of current through one switch, the controlled power group may be divided into multiple groups. Each divided group is connected to a respective switch that only needs to provide current for that divided group. However, the switches for all divided groups are <u>simultaneously controlled</u> by the power supply system control part **5** or the next-processing necessity determining part. Thus, the reason for dividing the controlled power group into multiple groups is to avoid huge current going through any one switch. This division of the controlled power group into multiple groups does not affect how power is controlled. More specifically, the <u>entire</u> controlled power group is controlled in the <u>same way</u>, i.e., all divided groups are turned on or off at the <u>same time</u> by simultaneously controlling their respective switches. Furthermore, the <u>entire</u> controlled power group is also controlled in the <u>daisy chain</u> manner by either control part **5** or determining part **7** in the preceding power control group. Thus, paragraph [0042] does not disclose the feature noted above for claim 1.

Second, Yamada does not disclose "wherein the always-on power domain … further <u>independently determines power on and off state of each of the at least one collapsible power domain</u>," as recited in claim 1. Rather, FIGS. 1, 2 and 7 of Yamada show daisy chain operation, with the always on power supply group **2** or A controlling power to <u>only</u> the next

power supply group $\mathbf{3_1}$ or B, which in turn controls the power to <u>only</u> the next controlled power supply group. With the daisy chain operation of Yamada, the last processing parts **3n**, **15** and **16** may be turned on only if all preceding processing parts are also turned on. Yamada thus does not disclose this feature of claim 1.

For at least the above reasons, Applicant submits that claim 1 is not anticipated by Yamada. Claims 1, 3-7, 9, 11-16, 18, 21, and 37-39 are dependent on claim 1 and are not anticipated by Yamada for at least the reasons noted above for base claim 1.

Independent claims 23, 27 and 34 have each been amended to recite the features noted above for claim 1. Claims 24 and 26 are dependent on claim 23, claims 28-31 are dependent on claim 27, and claims 35 and 36 are dependent on claim 34. These claims are not anticipated by Yamada for at least the reasons noted above for claim 1

Accordingly, the §102(a) rejection of claims 1, 3-7, 9, 11-16, 18, 21, 23, 24, 26-31 and 34-39 should be withdrawn.

<u>Rejection of Claims 2, 8, 10, 17, 19, 20, 22, 25, 32 and 33 Under 35 U.S.C. §103(a)</u>

Claim 17 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada *et al* (US2003/0133337).

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada in view of Hattori *et al*. (US2002/0094840).

Claims 8, 10, 22, 25, 32 and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada in view of Grayson *et al*. (US 6,219,564).

Claims 19 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada in view of Foster *et al*. (US 6,715,085).

Claims 2, 8, 10, 17 and 2 are dependent on claim 1. Claims 25 is dependent on claim 23. Claims 32 and 33 are dependent on claim 27. Independent claims 19 and 20 have each been amended to recite the features noted above for claim 1. Yamada does not disclose all elements of base claims 1, 23 and 27, as noted above. Yamada is thus an insufficient basis for the §103(a) rejection of dependent claims 2, 8, 10, 17, 22, 25, 32 and 33. Other references do not address the deficiencies of the Yamada reference.

Accordingly, the §103(a) rejection of claims 2, 8, 10, 17, 19, 20, 22, 25, 32 and 33 should be withdrawn.

CONCLUSION

In light of the amendments contained herein, Applicant submits that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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